

CLAIMS:

1. A method of monitoring the reliability of a data link (4) for a data transmission between a server data processing apparatus (2, 6) and a client data processing apparatus (7, 8),

in which a server application program (9) is run on the server (2, 6), which
5 server application program comprises a control unit (14) for generating control data and a control unit (15),

in which a client application program (10) is run on the client (8), which client application program comprises a representation unit (16) for generating image data for representing an image on a client display screen (11) which is connected to the client (8), and
10 also comprises a test unit (18),

in which the server application (9) and the client application (10) exchange data via a data link (4),

in which the representation unit (16) generates, in dependence on incoming control data, image data in order to form a control representation (23, 23') on the client
15 display screen (11),

in which the control unit (14) is triggered by means of a trigger signal,

in which the control unit (14) generates, after the arrival of the trigger signal and for a predetermined running time which starts anew at each trigger signal, first control data which generate a first control representation (23) on the client display screen, which first
20 control representation optically informs the user of the existence of a reliable data link,

in which the control unit (14) generates second control data after expiration of the delay time, which second control data generates a second control representation (23') on the client display screen (11) which optically informs the user of the absence of a reliable data link (4),

25 in which the control unit (15) carries out a test procedure during which the control unit (15) periodically transmits a test message to the test unit (18),

in which the test unit (18) returns, in dependence on the incoming test message, this test message or a different test message to the server application (9),

in which the control unit (14) is triggered in the context of the test procedure only if the returned test message is in order, and

in which the period of the test procedure with which the control unit (15) repeats the transmission of the test messages is shorter than the running time during which
5 the control unit (14) generates the first control data.

2. A method as claimed in claim 1, characterized in that
the trigger signal is formed by the test message returned by the test unit (18),
in which method the test unit (18) transmits the trigger signal to the control

10 unit (14) and

in which method the control unit (14) is triggered by the trigger signal only if this signal is in order.

3. A method as claimed in claim 1 or 2, characterized in that the trigger signal is
15 formed by the test message transmitted by the control unit (15) and is returned by the test unit (18).

4. A method as claimed in one of the claims 1 to 3, characterized in that
the test unit (18) generates an error message in the case where no test message
20 transmitted by the control unit (15) reaches the test unit (18) during a predetermined test time which is longer than the period of the test procedure,

in which method the test unit (18) applies the error message directly to the representation unit (16) which forms, on the basis of the test message, a suitable warning indication (32) on the client display screen (11) which can be optically recognized by the user
25 and/or

in which method the test unit (18) applies the error message directly to a sound card (19) of the client (8) which outputs, on the basis of the error message, via a loudspeaker (20), a suitable warning indication which can be acoustically recognized by the user.

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5. A method as claimed in one of the claims 1 to 4, characterized in that
the server (2, 6) can be connected to an open and/or external data network (4)
and to a closed and/or internal data network (3), so that the data link between the server (2, 6)

and the client (7, 8) can be formed at option by the open and/or external data network (4) or by the closed and/or internal data network (3),

in which method the control device (15) tests, when the client (7, 8) logs into the server (2, 6), whether the client (7, 8) logs in via the open and/or external data

5 network (4) or via the closed and/or internal data network (3),

in which method, in the case where the client (8) logs in via the open and/or external data network (4), the control unit (15) starts the test procedure and transmits a first test message to the test unit (18),

10 in which method, in the case where the client (7) logs in via the closed and internal data network (3), the control unit (5) does not start the test procedure and repeatedly transmits, independently therefrom, trigger signals to the control unit (14) with the period of the test procedure.

6. A method as claimed in one of the claims 1 to 5, characterized in that

15 the control unit (15) carries out a function test prior to the execution of the test procedure or in the context of the test procedure, which function test tests whether the test unit (18) is present and/or which version of the test unit (18) is involved and/or whether communication with the test unit (18) is possible,

20 in which method, in the case where appropriate communication with a compatible version of the test unit (18) is possible, the control unit (15) starts or continues the test procedure and otherwise does not start or interrupts the test procedure and drives the control unit (14) in such a manner that it does not transmit control data to the representation unit (16).

25 7. A method as claimed in claim 6, characterized in that

in the case where appropriate communication with a compatible version of the test unit (18) is not possible, the control unit generates an error message and applies it to the representation unit (16), the representation unit (16) then forming, on the basis of the error message, a suitable warning indication (47) on the client display screen (11) which can be
30 optically recognized by the user.

8. A method as claimed in claim 6 or 7, characterized in that

at least the first test message is configured in such a manner that it, or the test message returned by the test unit (18) in response thereto, can be evaluated by the control unit (15) for the function test.

5 9. A method as claimed in one of the claims 1 to 8, characterized in that the data link between the client (8) and the server (2) is formed by an open and/or external data network (4),

in which method the server application (9) and/or the client application (10) generate at least one main channel (38) for data transmission via which the representation unit (16) receives the output data and the control data,

10 in which method the test unit (18) generates at least one additional channel (39) for data transmission via which the test messages are transmitted.

10. A method as claimed in claim 9, characterized in that
15 in the context of the test procedure the control unit generates an error message in the case where the test message returned by the test unit (18) is not in order and applies this message, via the additional channel (39), to the test unit (18) which drives in response thereto a sound card (19) of the client (8) in order to generate a suitable warning indication which can be acoustically perceived by the user.

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11. A method as claimed in one of the claims 1 to 10, characterized in that
in the context of the test procedure the control unit 15 generates an error message in the case where the test message returned by the test unit (18) is not in order and applies this message to the representation unit (16) which forms on the client display
25 screen (11), on the basis of the error message, a suitable warning indication (36) which can be optically recognized by the user.

12. A method as claimed in one of the claims 1 to 11, characterized in that
the control unit (14) generates a video sequence, in which method the first
30 control representation (23) is formed by a moving sequence of images whereas the second control representation (23') is formed by a still image.

13. A method as claimed in one of the claims 1 to 12, characterized in that

the server (2, 6) has access to patient data which is continuously generated by at least one patient monitoring device (5),

in which method the server application (9) enables a client (7, 8) or several clients (7, 8) to access the patient data of one or more patients, and

5 in which method an output unit (13) of the server arrangement (9) prepares the patient data of the respective selected patient and forms therefrom output data which forms on the client display screen (11), via the representation unit (16), an output representation (29) which is suitable to enable monitoring of the patient data by the user.

10 14. A method as claimed in claim 13, characterized in that at least one of the patient monitoring devices (5) is a childbirth monitoring device.

15 15. A software package for carrying out a method as claimed in one of the claims 1 to 14, comprising a server application program (9) and a client application program (10).

16. A software package as claimed in claim 15, characterized as disclosed in the characterizing part of at least one of the claims 1 to 14.